PRISM A1 SERIES

Operating Instructions
Colour Television

FASTEXT

NICAM Digital Stereo

Models

TX-28A1
TX-24A1

(U.K. Standard)

Panasonic

Please read these instructions completely, before operating this set.

TQB8E0470-2

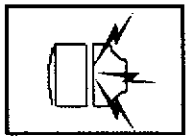
Dear Panasonic Customer

Welcome to the Panasonic family of customers. We hope that you have many years of enjoyment from your new colour television set.

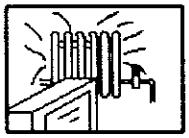
Warnings and Precautions

This TV set is designed to operate on AC 240V, 50Hz. It is exclusively for broadcast system PAL I. (U.K. Standard)

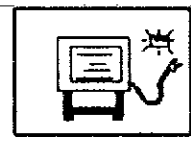
To prevent damage which might result in electric shock or fire, do not expose this TV set to rain or excessive moisture.



WARNING: HIGH VOLTAGE ! ! !
Do not remove the rear cover as live parts are accessible when it is removed. There are no user serviceable parts inside.

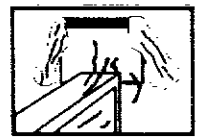


Avoid exposing the TV set to direct sunlight and other sources of heat.



Remove the mains plug from the wall socket when the TV set is not used for a prolonged period of time. Especially when retiring at night.

CABINET AND PICTURE TUBE CARE
Remove the mains plug from the wall socket. The cabinet and picture tube can be kept in good condition by simply wiping with a clean, soft cloth moistened with mild detergent and water. Do not use solutions containing benzol or petroleum.



Adequate ventilation is essential to prevent failure of electrical components.

IMPORTANT

The wires in this mains lead are coloured in accordance with the following code:

BLUE: NEUTRAL BROWN: LIVE

As the colours of the wires in this mains lead may not correspond to the markings identifying the terminals in your plug, proceed as follows:

1. The BLUE wire must be connected to the terminal marked 'N' or coloured black.
2. The BROWN wire must be connected to the terminal marked 'L' or coloured red.

If a 13 amp BS1363 plug is used a 5 amp rating fuse must be fitted.

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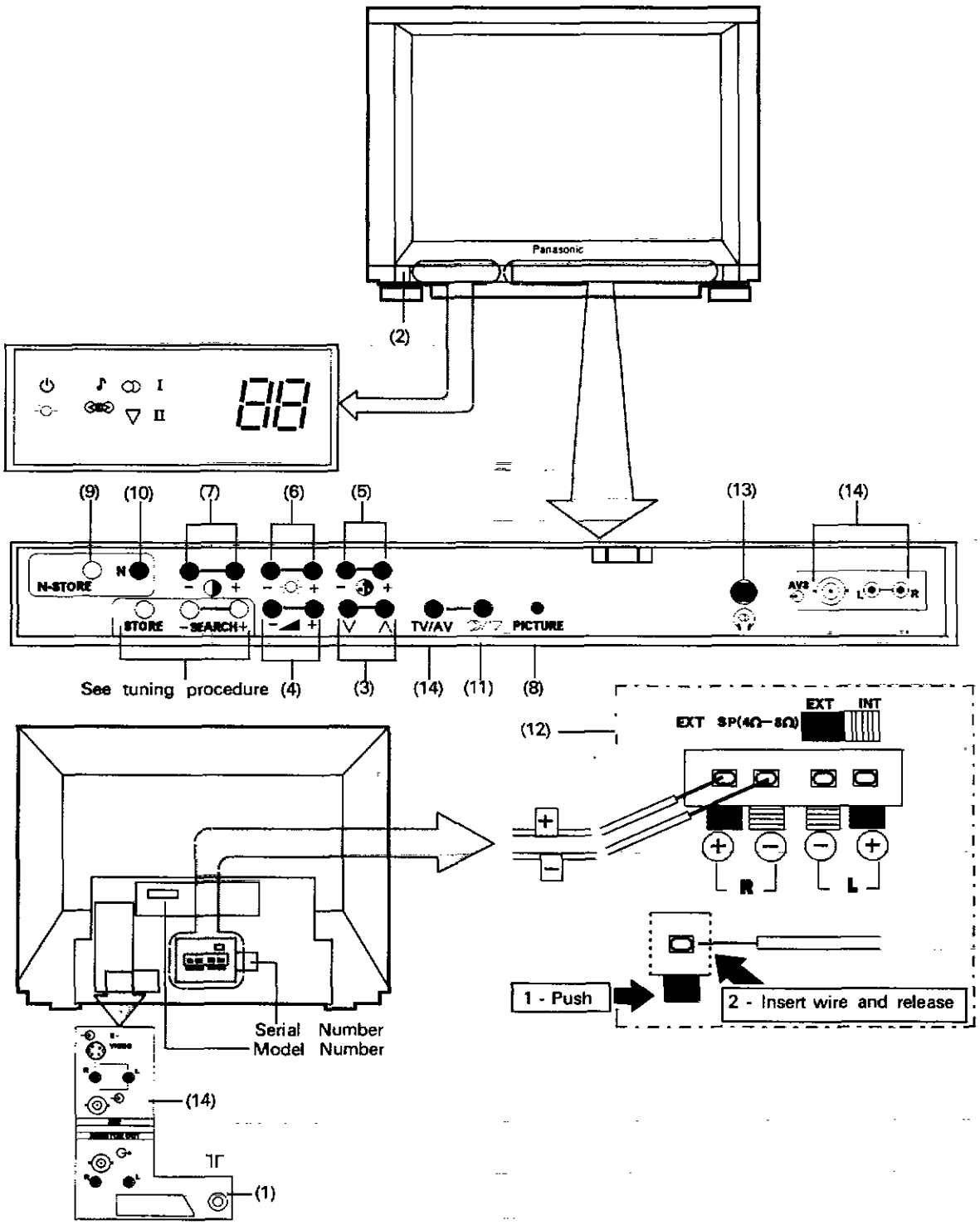
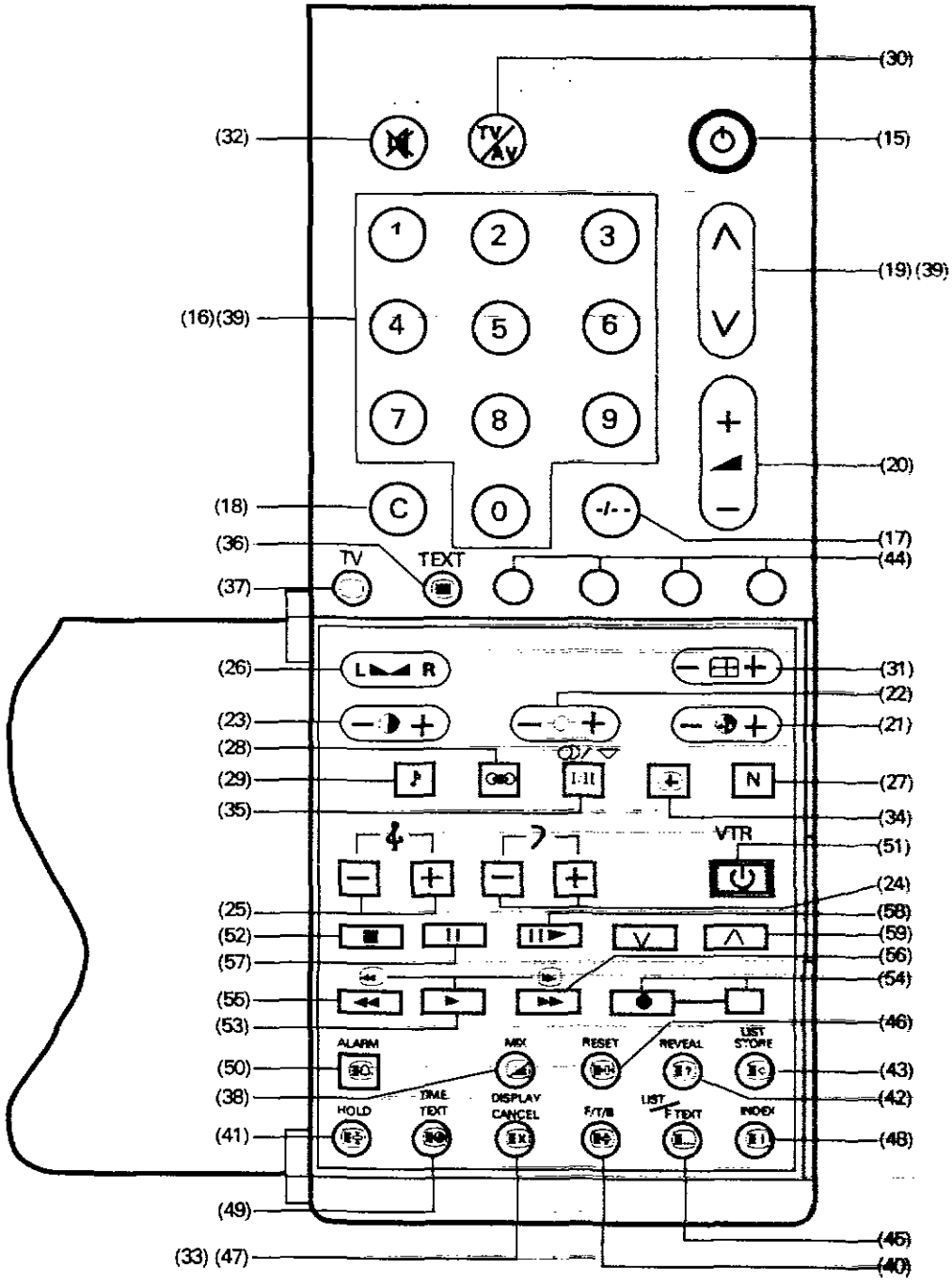
Location of Controls



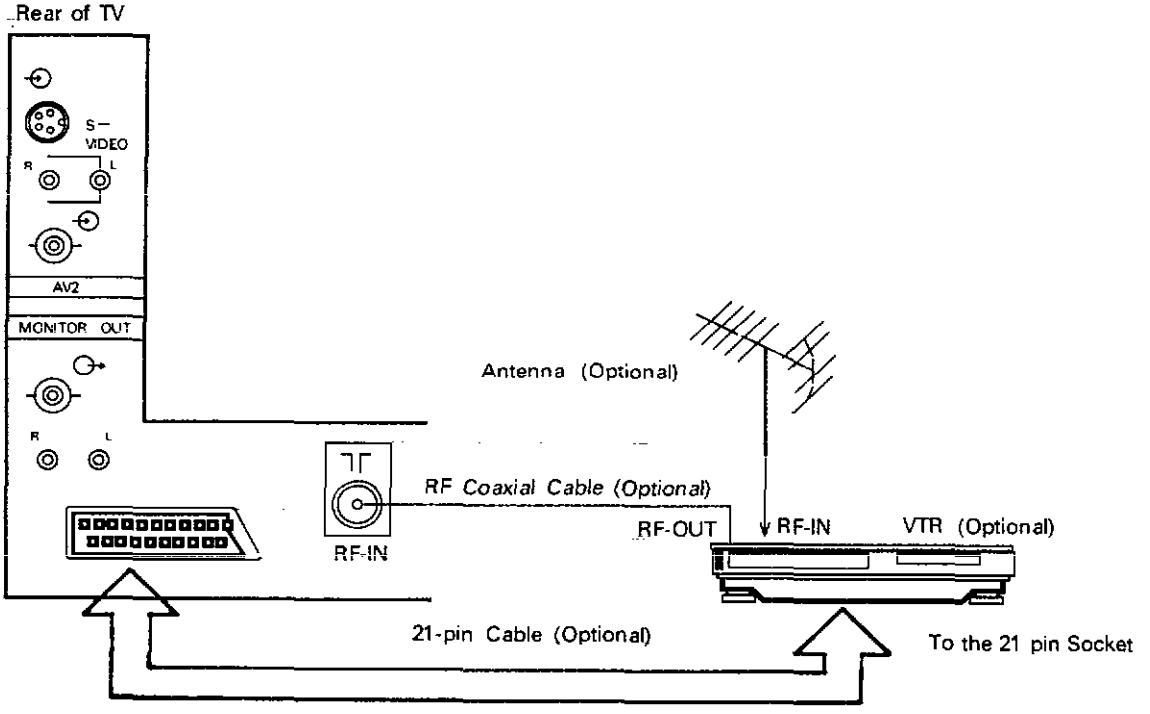
Remote Control Transmitter



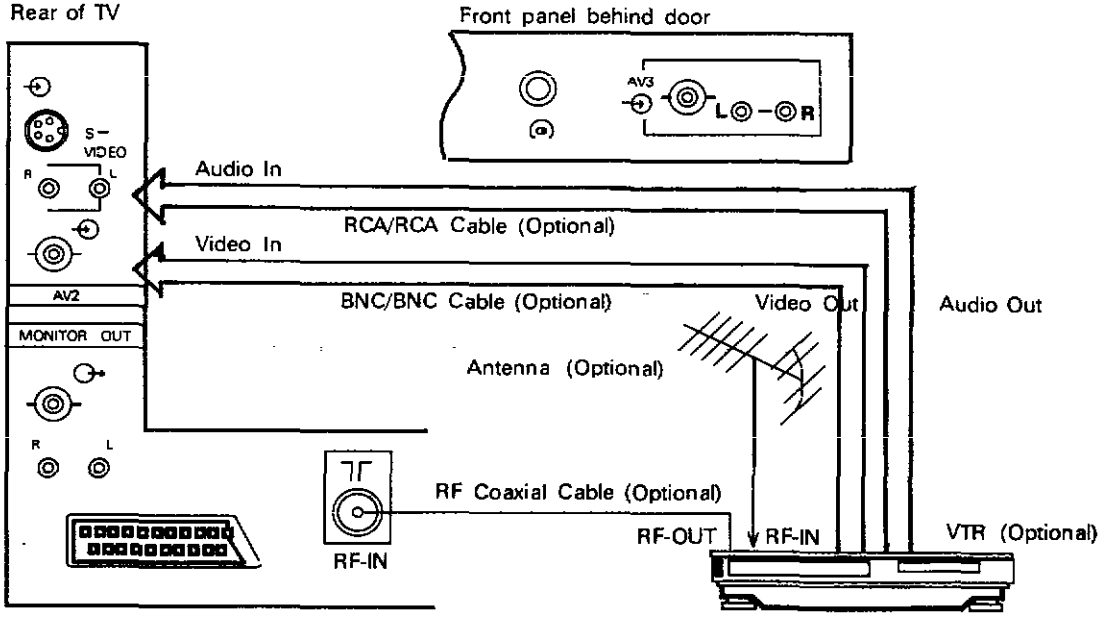
Note : An adhesive label is provided with the remote control to provide a reference to the key functions. This label can be attatched to the inside of the lid on the remote control hand unit.

Connections

To VTR equipped with 21-pin terminal

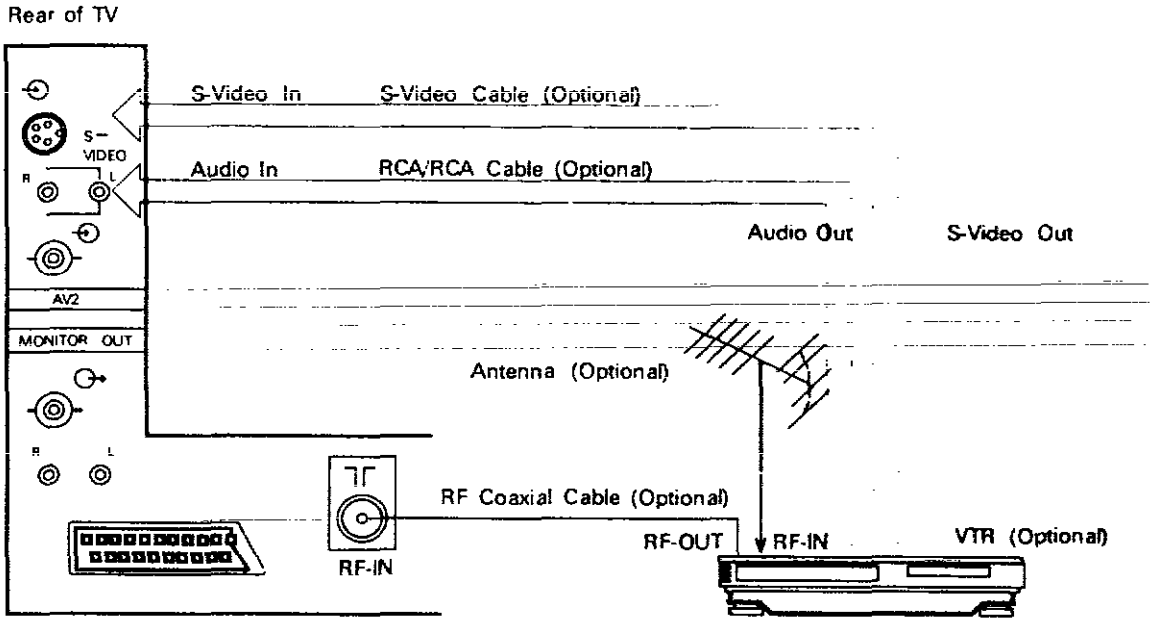


To VTR not equipped with 21-pin terminal or S-VHS terminal

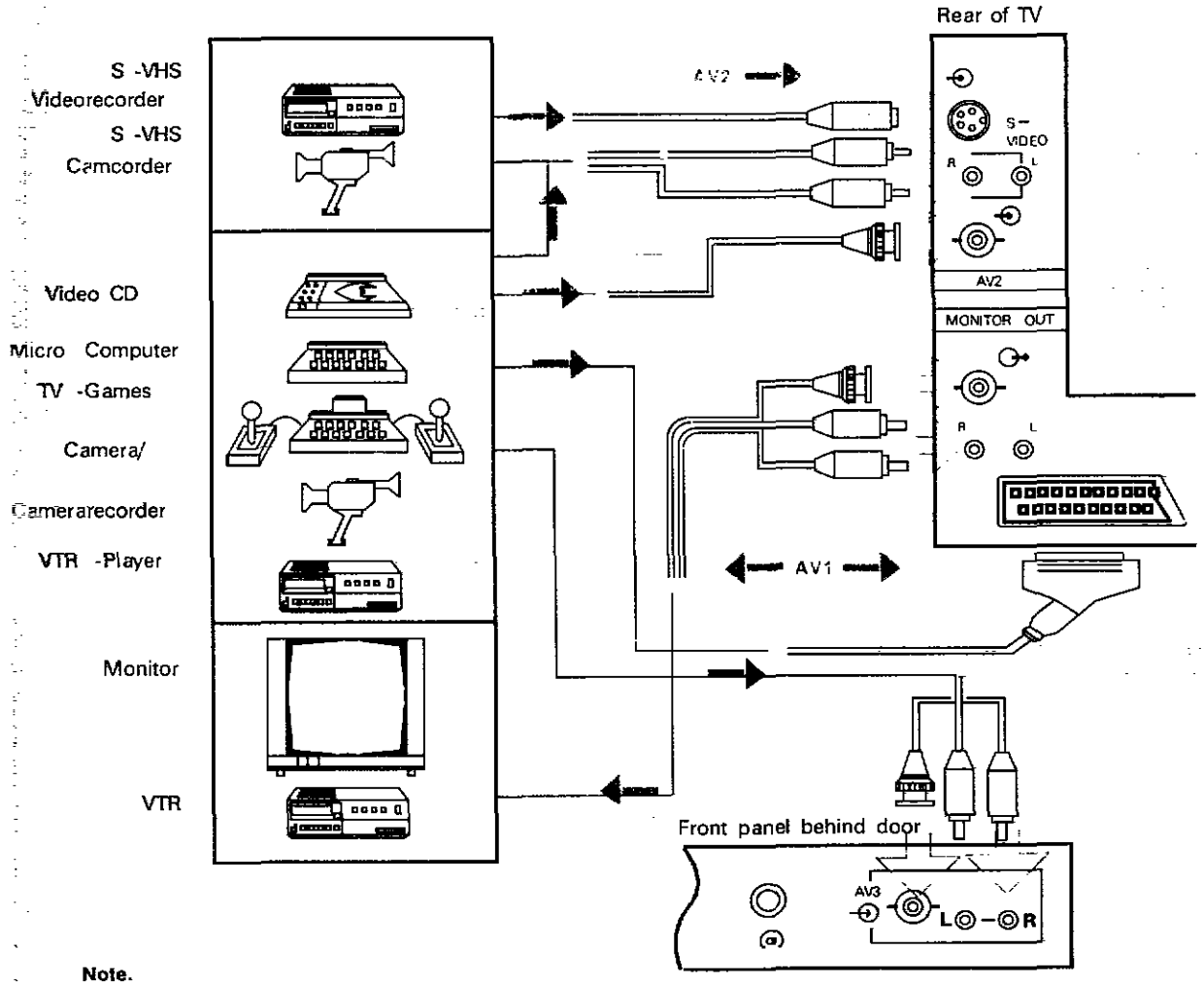


Connections

To VTR equipped with S-Video (S-VHS) terminal



Audio / Video Connections



Note.

1. Do not connect a computer with TTL output (5V) to this TV set.
2. MONITOR OUT Terminals contain signals which are present on the TV screen at that time, e.g. TV programmes or signals from AV1, AV2 or AV3 input (excluding RGB Input from AV1).
3. RGB Input from a Computer or TV game via the 21 pin AV1 terminal has priority over other AV Inputs and TV programmes, i.e. the TV game Input will be viewed on the programme position selected at that time or the AV position previously selected. RGB input will not be synchronised until the TV/AV button is pressed to select AV1 mode.
   Important note: RGB signal must comply with 'CENELEC' standard, ie. signal consisting of RGB, Composite video for synchronisation, STATUS RGB for switching.
4. The S-VHS Terminal will have priority over the BNC Video Input if both are connected simultaneously The RCA Audio Input terminals are common to the S-VHS and BNC terminals for AV2.

This symbol indicates INPUT only.

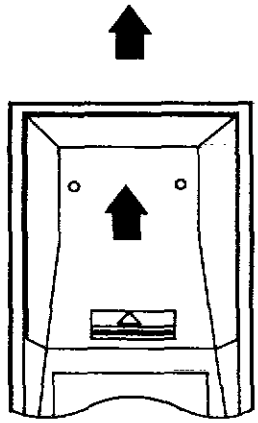
This symbol indicates INPUT and OUTPUT.

This symbol indicates OUTPUT only.

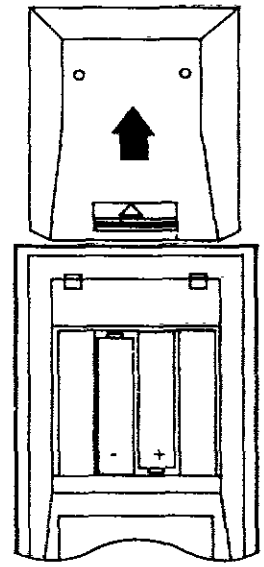
Battery Installation and Replacement

(Remote Control Transmitter)

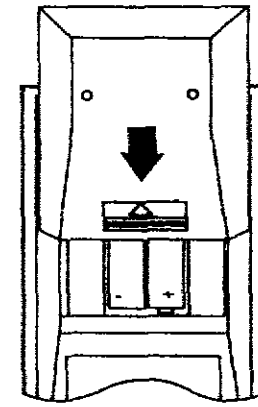
Batteries: Use two 'R03' or ' AAA ' dry cells (supplied).



1. Remove the battery compartment lid.



2. Insert the batteries correctly as indicated by the (+) and (-) symbols.



3. Replace the cover.

BATTERY PRECAUTIONS

1. Do not use an old battery with a new one.
2. Ensure the batteries are inserted correctly.
3. Do not use rechargeable (Ni-Cad) batteries. They are partially different in shape and performance and may not ensure the desired function.

Tuning Procedure

ease refer to location of controls on page 2.

rogramme Positions

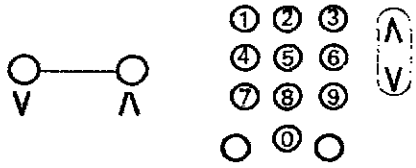
ote:

ere are 50 programme positions available i.e. 50 positions on which to store different channels.
rogramme positions can be selected in a number of ways (see below).

peration

ethod 1.

lect a programme position (1-50), using
programme up/down buttons on the T.V.
remote control.



se the SEARCH up or down buttons until
desired channel is received.

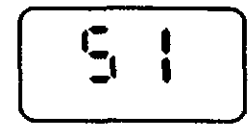
se the STORE button to store this channel
the T.V.'s memory.

peat this procedure, using different pro-
mme positions to store other channels.

Method 2.

(If channel numbers are known)
Select a programme position (1-50).
Press the button marked 'C' on the remote control. The display will now show '- -'.

Enter the desired channel number, e.g. to receive channel 51, push buttons '5' and '1' consecutively.



Press the **STORE** button to store this channel in the T.V.'s memory.

Repeat this procedure, using different programme positions to store other channels. Consult your dealer about the channel numbers for your area.

Operation of T.V. Controls

Please refer to location of controls on page 2.

(1) Aerial Connection

Connect the aerial lead to the socket marked 'Ψ' at the rear of the T.V.

(2) Power Switch

Push to switch the T.V. on, push again to switch off.

(3) Programme Up/Down

Press once to increase or decrease the programme position by one.

(4) Volume Up/Down

Press the ' +' button to increase the sound level.
Press the ' - ' button to decrease the sound level, displayed as a green bar.

(5) Colour Up/Down

Press the ' +' button to increase the colour level.
Press the ' - ' button to decrease the colour level. displayed as a red bar.

(6) Brightness Up/Down

Press the ' +' button to increase the brightness level.
Press the ' - ' button to decrease the brightness level. displayed as a white bar.

(7) Contrast Up/Down

Press the ' +' button to increase the contrast level
Press the ' - ' button to decrease the contrast level. displayed as a cyan bar.

(8) Picture Control

Turn left or right for a softer or sharper picture.

(9) Normalisation Store

Adjust the volume, brightness, colour, contrast, bass, treble, balance etc. to normal viewing levels. Press this button to store these levels in the T.V. memory.

(10) Normalisation

If levels of volume, brightness, colour, contrast, bass, treble and balance have been altered, they can be set back to their stored levels,by pressing this button.

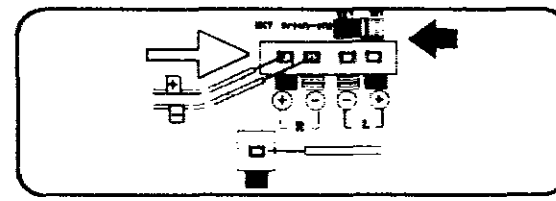
(11) A.V.Stereo/Mono Selection

Press this button to select A.V. stereo or mono operation. The function indicator on the T.V. will light to show which mode is selected. This button operates in A.V. mode only.
Note: A Stereo VTR connected to the appropriate AV terminals is required to achieve Stereo reproduction for this facility.

⊙⊙ =STEREO ▽ =MONO

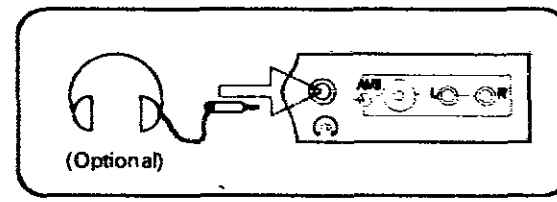
(12) External Loudspeakers

External loudspeaker terminals are provided at the rear of the T.V. for the connection of a pair of Hi-Fi loudspeakers of 4-8 Ohm impedance. The speakers are switchable from internal to external by means of a slide switch situated above the terminals. To select external speakers, move the switch to the EXT position. The internal speakers will be disconnected when external speakers are selected.



(13) Headphones

A 3.5mm stereo headphone socket is available for the connection of a pair of 8-300 Ohm impedance headphones. The T.V. speakers will be automatically disconnected while the headphones are connected.



Operation of T.V. Controls

Please refer to location of controls on page 2.

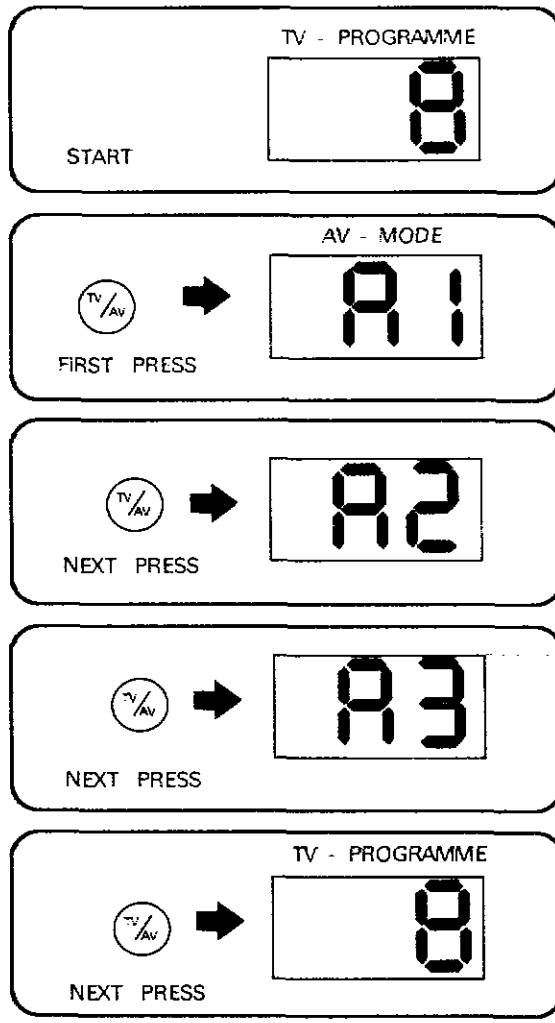
(14) TV/AV Selection

Terminals are available at the front and rear of the TV for direct audio/video inputs or outputs. To select these terminals, press the TV/AV button. This selects AV1, press again to select AV2, press again to select AV3, press again to return to T.V.mode.

AV2 has a connection for VTR's equipped with Super VHS (S-VHS); refer to your VTR operating instructions for full details.

NOTE: When a connection is made to the S-VHS socket, the AV2 terminal VIDEO input (BNC) is automatically disconnected , the AV2 AUDIO input is unaffected.

Examples of AV connections are shown on page 6.

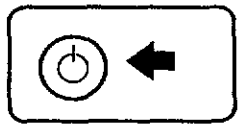


Remote Control Operation for TV

Please refer to the remote control diagram on page 3.

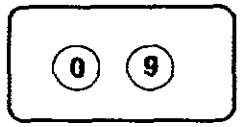
(15) Standby

Press this button to switch the TV.off for short periods. Press again to switch on, or select a programme position from 1-50.



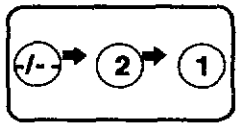
(16) Prog./Channel/Page Selection

Press these buttons to select programme positions, channel numbers or Teletext pages.



(17) Programme Position 10 - 50

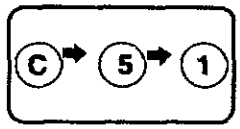
To select double figure programme positions (10-50), press this button and then enter the programme position number using buttons 0-9.



(18) Direct Channel Selection

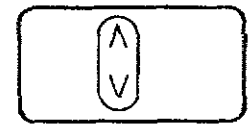
Press this button, the display will now show '- -'. Now enter the channel number, using buttons 0-9 on the keyboard. To select channel number 51 , press buttons '5' and '1' consecutively.

NOTE: The channel number indication changes back to the previously selected programme position number.



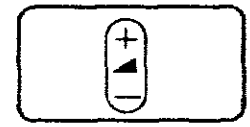
(19) Programme Up/Down

Press the up/down buttons to increase/decrease the programme position by 1.



(20) Volume Up/Down

Press the '+' button to increase the sound level. Press the '-' button to decrease the sound level, displayed as a green bar.

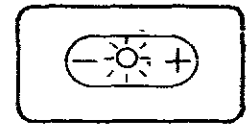


(21) Colour Up/Down

Press the '+' button to increase the colour level. Press the '-' button to decrease the colour level, displayed as a red bar.

(22) Brightness Up/Down

Press the '+' button to increase the brightness level. Press the '-' button to decrease the brightness level, displayed as a white bar.

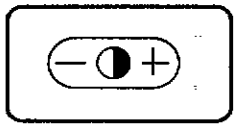


Remote Control Operation for TV

Please refer to the remote control diagram on page 3.

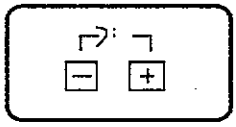
(23) Contrast Up/Down

Press the '+' button to increase the contrast level.Press the '-' button to decrease the contrast level, displayed as a cyan bar.



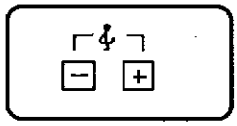
(24) Bass Up/Down

Press the (+) button to increase the bass level.Press the (-) button to decrease the bass level, displayed as a blue bar.



(25) Treble Up/Down

Press the (+) button to increase the treble level. Press the (-) button to decrease the treble level, displayed as a yellow bar.



(26) Balance

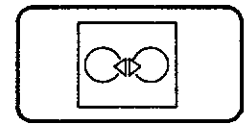
Press the 'R' button to bias the sound to the right. Press the 'L' button to bias the sound to the left, displayed as a magenta bar.

(27) Normalisation

If levels of volume, brightness, colour, contrast, bass, treble, balance etc. have been altered, they can be set back to their stored levels,by pressing this button.

(28) Ambience

Ambience sound is a dynamic sound system that gives a feeling of greater acoustic presence. Press this button to obtain better acoustic sound from the speakers.

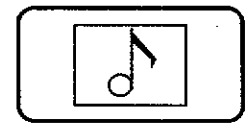


(29) Music/Speech

Press this button to enhance the TV sound. The Music/Speech indicator on the front of theTV will light up in the Music mode, in the Speech mode there is no indication. Note: When the TV is first switched ON using the On Off button,the selected mode will always be Music Mode and the music symbol will light.

Music Mode

To have a wider frequency range.



Speech Mode

To have a soft tone for easier listening.

(30) TV/AV Selection

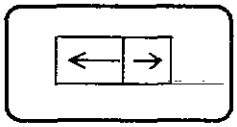
Terminals are available at the front and rear of the TV for direct audio/video inputs or outputs. To select these terminals, press the TV/AV button. This selects AV1, press again to select AV2, press again to select AV3, press again to return to T.V.mode.
AV2 has a connection for VTR's equipped with Super VHS (S-VHS); refer to your VTR operating instructions for full details.
NOTE: When a connection is made to the S-VHS socket, the AV2 terminal VIDEO input (BNC) is automatically disconnected , the AV2 AUDIO input is unaffected.
Examples of AV connections are shown on page 6.

Remote Control Operation for TV

Please refer to the remote control diagram on page 3.

(31) Fine Tune

Press the fine tune (+) or (-) buttons for best reception.



(32) Sound Mute

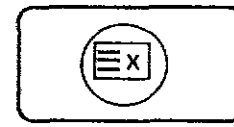
Press this button to mute the sound.To restore the sound, perform any one of the following:

(a) Press the sound mute button again.
(b) Press the STANDBY button to set the TV in the standby condition, then press again.
(c) Press the VOLUME up or down buttons.
(d) Press the PROGRAMME up or down buttons.
(e) Press the NORMALISATION button.
(f) Press the PROGRAMME select buttons 0 - 9.

(33) Display Cancel

The levels of colour, contrast etc, have an on screen indicator to show which level they are set at. The level is indicated by a black box within a coloured bar. Press this button in the TV mode the indicator 'bar' will display in RED or BLACK

RED = indicator ON. BLACK = indicator OFF.



Decrease level Increase level

BLACK = indicator OFF.

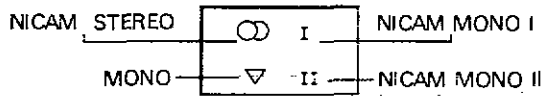
RED = indicator ON.

(34) Status

Press this button, the screen will now show the programme position at the top left, the time at the top right and the name of the Teletext if transmitted. If the Panasonic alarm has been set, then the time remaining will be shown in place of the Teletext name The channel number will be displayed on the programme indicator

Nicam Stereo Sound System

› receive NICAM broadcasts, this set incororates a NICAM decoder. When a stereo, dual-soundtrack or onaural NICAM programme is being received, the indicators light to inform you of the type of broadcasts.



(35) Sound Channel Selection Button

Sound output can be selected by pushing the sound channel button on the remote control transmitter.
(Item 35 on page 3)

Independent Switching Operation of Receiving Signal

To carry out switching operation, use 'Sound Channel Selection button on the remote control transmitter. The sound will change with each press ; refer to the chart below.

YPE OF BROADCAST	SWITCHING OPERATION
STANDARD AUDIO	STANDARD AUDIO
EGULAR + NICAM STEREO	STEREO → STANDARD AUDIO
EGULAR + NICAM MONO I	NICAM MONO I → STANDARD AUDIO
REGULAR + NICAM DUAL MONO	NICAM MONO I → NICAM MONO II → NICAM MONO I + II → STANDARD AUDIO

lecting Mode and Receiving Signal Correlation

ELECTION MODE	TYPE OF BROADCAST			
	REGULAR BROADCAST	REGULAR + NICAM STEREO	REGULAR + NICAM MONO	REGULAR + NICAM DUAL MONO
REGULAR	STANDARD AUDIO	STANDARD AUDIO	STANDARD AUDIO	STANDARD AUDIO
NICAM STEREO	STANDARD AUDIO	STEREO	NICAM MONO I	NICAM MONO I
NICAM MONO I	STANDARD AUDIO	STEREO	NICAM MONO I	NICAM MONO I
NICAM MONO II	STANDARD AUDIO	STEREO	NICAM MONO I	NICAM MONO II
NICAM MONO I +II	STANDARD AUDIO	STEREO	NICAM MONO I	NICAM MONO I +II

NOTES:

1) When the power is switched ON, the mode is pre-set at 'NICAM MONO 1 / STEREO'.
2) Even when the content of the received signal changes, selection mode does not alter.
3) When the receiving conditions deteriorate,the TV set will automatically switch to MONO mode.
4) If the receiving conditions deteriorate, the audio reception may vary between STEREO and MONO, in this case It is advisable to switch to MONO mode.(▽),ie Regular sound.

Nicam Stereo Sound System

Please refer to the remote control diagram on page 3.

TYPE OF BROADCAST	SELECTION MODE	INDICATION	SOUND OUT			
			SPEAKER		HEADPHONE	
			L - CH	R- CH	L - CH	R- CH
REGULAR BROADCAST (STANDARD AUDIO)	REGULAR	NO INDICATION	STANDARD AUDIO	STANDARD AUDIO	STANDARD AUDIO	STANDARD AUDIO
REGULAR + NICAM STEREO	NICAM STEREO	⊙⊙	STEREO L	STEREO R	STEREO L	STEREO R
	REGULAR	▽	STANDARD AUDIO	STANDARD AUDIO	STANDARD AUDIO	STANDARD AUDIO
REGULAR + NICAM MONO I	NICAM MONO I	I	NICAM MONO I	NICAM MONO I	NICAM MONO I	NICAM MONO I
	REGULAR	▽	STANDARD AUDIO	STANDARD AUDIO	STANDARD AUDIO	STANDARD AUDIO
REGULAR + NICAM DUAL MONO	NICAM MONO I	I	NICAM MONO I	NICAM MONO I	NICAM MONO I	NICAM MONO I
	NICAM MONO II	II	NICAM MONO II	NICAM MONO II	NICAM MONO II	NICAM MONO II
	NICAM MONO I + II	I II	NICAM MONO I	NICAM MONO II	NICAM MONO I	NICAM MONO II
	REGULAR	▽	REGULAR	REGULAR	REGULAR	REGULAR

Important note:

When your television is first switched on, it will automatically receive stereo broadcasts if they are being transmitted.

When the broadcasting authorities are carrying out test transmissions, it is therefore possible that the sound received will be different from the programme being viewed.

In order to receive co-ordinated sound and vision, simply press the Sound Channel selection button item (35) on the handset. [I/II]

This will only apply until the stereo broadcast transmissions are fully operational.

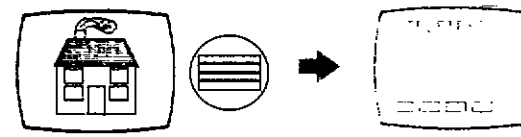
Remote Control Operation for Teletext

Please refer to the remote control diagram on page 3.

This picture is used to represent TV mode. all other pictures represent TELETEXT mode.

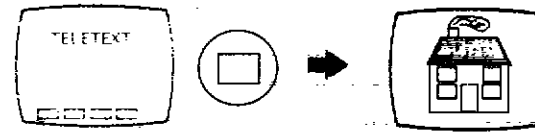
(36) Text

Press this button to change from TV to Teletext mode.
NOTE: Teletext information is only available if the channel selected is transmitting Teletext.



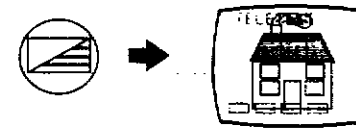
(37) TV

Press this button to change back to TV mode.
NOTE: Pressing the 'N' button will also change back to TV mode.



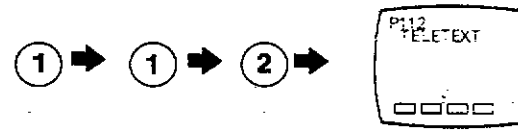
(38) Mix

Press this button to superimpose Teletext pictures onto the TV display.
NOTE: Unless the sound is muted,it will be present in TEXT, TV or MIX modes. Press the 'TV 'or 'N ' button to return to TV mode.



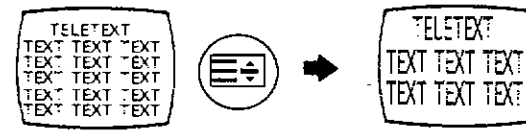
(39) Page Selection

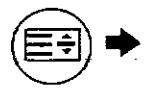
Pages can be selected in two ways:
(a) By entering the page number directly, using buttons 0-9 on the remote control.
(b) By using the ' ⇕ ' buttons to increase or decrease the page number by one.

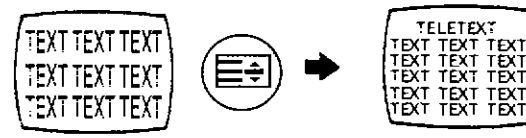


(40) Full/Top/Bottom

Press this button to expand the TOP half of the display. Press again to expand the BOTTOM half of the display. Press again to return the display to normal (FULL) size.

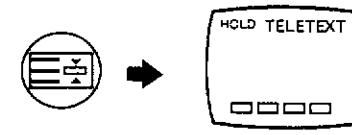






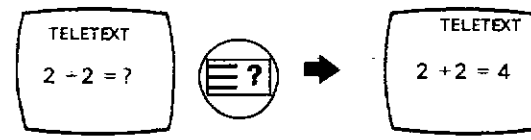
(41) Hold

When Teletext information exceeds more than one page, the display changes automatically to the next page. To hold a particular page, press this button.The word 'HOLD' will appear at the top left of the screen.This display will remain until the HOLD button is pressed again.



(42) Reveal

Press this button to reveal hidden words e.g. quiz pages with hidden answers. Press again to hide the word.



Remote Control Operation for Teletext

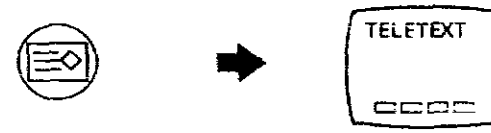
Please refer to the remote control diagram on page 3.

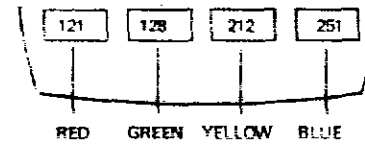
(43) List Store

In this mode, four differently coloured page numbers are situated at the bottom of the screen, each of these numbers can be altered and stored in the T.V. memory. To do this, press any one of the coloured buttons on the remote control, this will select the number to be changed. Then enter the new page number to be stored, using buttons 0-9 on the remote control.

NOTES:

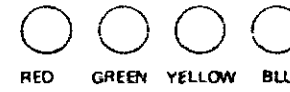
1. When first switching to LIST STORE mode, the page number coloured RED will be automatically selected. Press and hold the LIST STORE button until the page numbers change to WHITE indicating that the number is now stored in the T.V. memory.
2. All four page numbers will be stored at the same time. This facility enables the customer to store four different page numbers on 10 programme positions. This means that up to forty Videotext page numbers can be stored in the T.V. memory. These pages will remain in the memory, even when switching off. If there is no page number matching the entered number then the number selected will keep flashing.





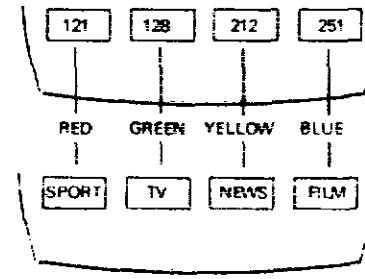
(44) Red/Green/Yellow/Blue Buttons

These four buttons are colour-coded to correspond to the differently coloured subjects in 'FASTEXT' mode. In 'LIST STORE' mode they correspond to the differently coloured page numbers.



(45) List/F.text

Press this button to change from LIST mode to FASTEXT mode and vice versa. In FASTEXT mode, four differently coloured subjects are situated at the bottom of the display. To access more information about one of these subjects, press the appropriately coloured button. This facility enables fast access to information of the subjects shown. NOTE: These subjects are determined by the broadcasting authorities and cannot be changed by the customer.



(46) Reset

Pressing this button in the FASTEXT mode will reset the present page, back to the index page. Pressing this button in the LIST STORE mode resets the present page to the RED coloured page number.

(47) Display Cancel

While searching for a Videotext page, the T.V. display can be viewed by pressing this button. When the page has been found, the found 'FND' symbol will be displayed at the top left of the screen.

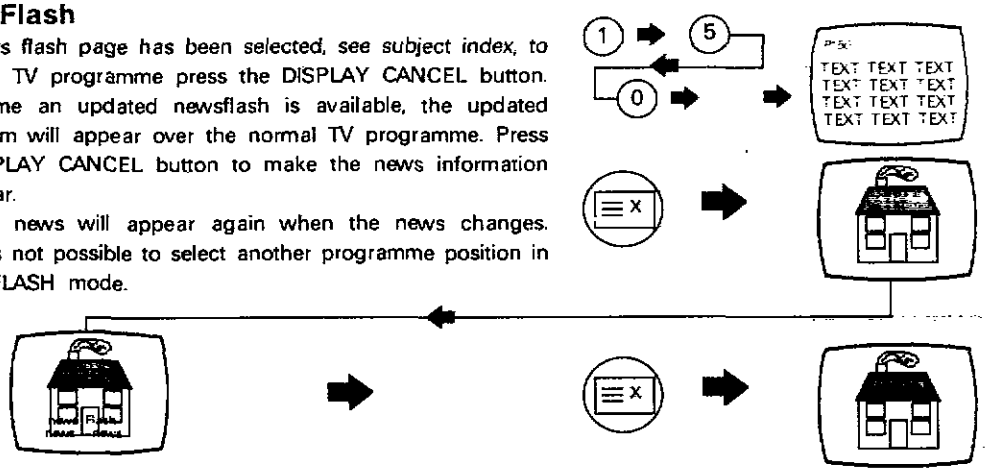
Remote Control Operation for Teletext

Please refer to the remote control diagram on page 3.

News Flash

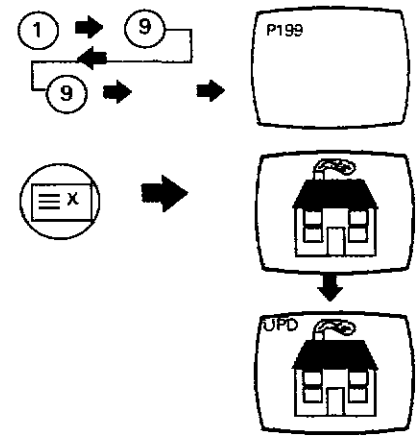
If a news flash page has been selected, see subject index, to view the TV programme press the DISPLAY CANCEL button. Every time an updated newsflash is available, the updated news item will appear over the normal TV programme. Press the DISPLAY CANCEL button to make the news information disappear.

Updated news will appear again when the news changes. Note:It is not possible to select another programme position in NEWS FLASH mode.



Update

Certain Teletext pages contain information which is constantly being updated or information containing several pages.If you have selected one of these pages, press the DISPLAY CANCEL button to view normal TV. When the page information changes the symbol UPD will be displayed at the top left of the screen. To view the updated page press the TEXT button, the page will disappear when the DISPLAY CANCEL button is pressed.



(48) Index

Push this button, in FASTEXT mode, to return to the main index page. Depending on the way information is transmitted by each TV channel, this INDEX button may need to be pushed more than once to return to the main index page.

Remote Control Operation for Teletext

Please refer to the remote control diagram on page 3.

(49) Time Text

This function is used for selected pages only e.g. The Teletext alarm page. Refer to the subject index for page location.

1) Select the TELETEXT alarm page, see subject index.

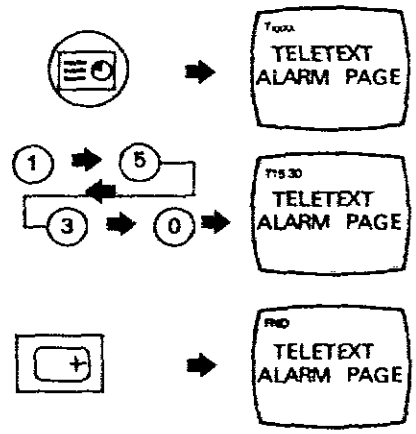
2) Press the TIME TEXT button. Txxxx will be displayed at the top left of the screen; now enter the time at which this alarm page should be displayed using buttons 0-9 on the remote control.

THIS FEATURE USES A 24 HOUR CLOCK.

EXAMPLE: To set the alarm for 3.30 PM; press buttons 1,5,3,0 consecutively, the Txxxx display will change to T15:30 momentarily then return to the current page number. If in LIST STORE mode the letter ' T ' will appear in the current coloured box at the bottom of the screen indicating that the alarm page has been set.

Press the DISPLAY CANCEL button to view TV. At 3.30pm the alarm page will be displayed.

To cancel this feature press the TV button to return to normal viewing, or the TEXT button if you wish to select other teletext pages, or press the RESET button.



Sub-coded page access (Time Text button)

When Teletext information exceeds more than one page, it may take some time for the automatic changing of the sub-pages to reach the sub-page you require. It is possible to enter your required sub-page and continue watching the normal programme until the correct sub-page is found.

1) Select the required TELETEXT page using buttons 0-9 on the remote control,

2) Press the TIME TEXT button, Txxxx will be displayed at the top left of the screen.

3) Enter the desired sub-page number before the Txxxx disappears. If you select sub-page 6 then you must press 0,0,0 and 6 buttons.

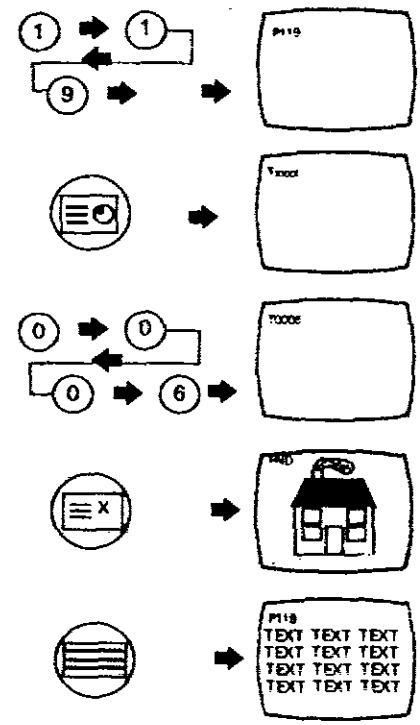
4) If in LIST STORE mode the letter ' T ' will appear in the current coloured box at the bottom of the screen indicating that the sub-coded page has been set.

5) Press DISPLAY CANCEL to view a normal TV programme. When the desired sub-page is found, the found FND symbol will appear at the top left of the screen.

6) Press the TEXT button to display the found sub-page.

7) To clear the sub-coded page, enter a new page number.

Note: It is not possible to select another programme during sub-page operation.



Remote Control Operation for Teletext

Please refer to the remote control diagram on page 3.

(50) Alarm.

This function can be used in TV or Teletext modes.

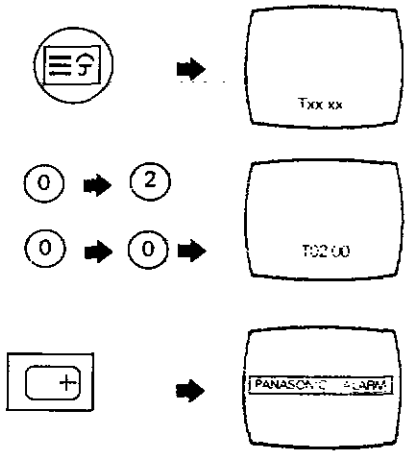
EXAMPLE: To set this alarm for two hours ahead: -

(a) Press the ALARM button.

(b) Using buttons 0-9 on the remote control, press 0,2,0,0 consecutively. The screen will show a normal TV display until after two hours when the PANASONIC ALARM page will be displayed.

NOTE: To check how much time is left until the alarm page is displayed, press the STATUS button.

To cancel this facility press the ALARM button again and press the reset button.

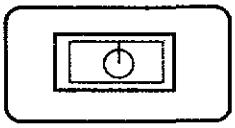


Remote Control Operation for VTR

Please refer to the remote control diagram on page 3.

This infra-red remote control is designed specifically to be used with selected Panasonic VTR's, consult your dealer for details. Some VTR's have different functions, so to ensure compatibility, please refer to the VTR instruction book or consult VTR function. The buttons for VTR operation are numbered below.

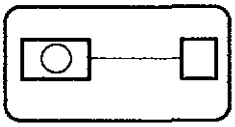
(51) Standby
Press to switch the VTR on or off.



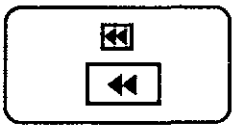
(52) Stop
Press this button to stop the tape.

(53) Play
Press this button to playback the tape.

(54) Record
Press these buttons together to record.

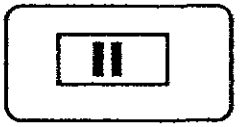


(55) Rewind/Review
Press this button to rewind the tape. In playback mode, press this button to view the picture in reverse rapidly.



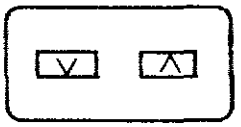
(56) Fast Forward/Cue
Press this button to fast forward the tape. In playback mode, press this button to view the picture rapidly forward.

(57) Pause/Still
Press this button in playback mode, the picture will stop

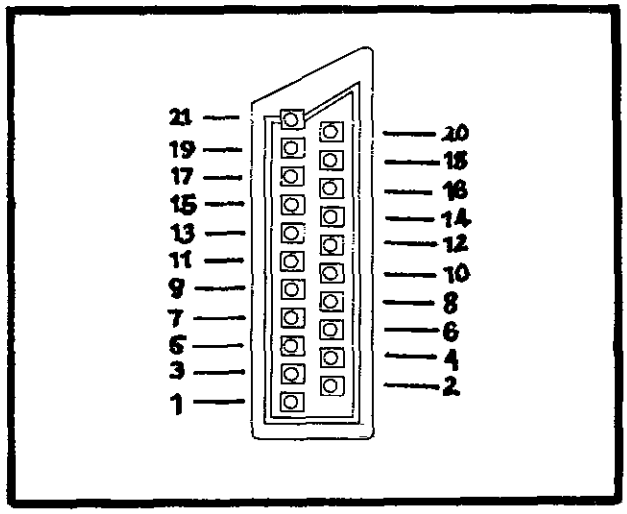


(58) Still Advance
While in the PAUSE/STILL mode press this button to advance the picture one frame at a time.

(59) Programme Up/Down
Press once to increase or decrease the programme position



21 Pin Terminal Explanation



AV1	
1	Audio out (R).
2	Audio in (R).
3	Audio out (L).
4	Audio earth.
5	Blue earth.
6	Audio in (L).
7	Blue in.
8	- -
9	Green earth.
10	- -
11	Green in.
12	- -
13	Red earth.
14	- -
15	Red in.
16	Status RGB.
17	CVBS earth.
18	RGB status earth.
19	CVBS out. (video)
20	CVBS in. (video)
21	Socket earth.

General Information

Sleep Feature
If the set is not switched off when the T.V. station stops transmitting at the end of the evening. It will automatically go to standby mode after 30 minutes.
Note : This function will not operate when the T.V. is in A.V. mode

Service
To obtain service please contact your local Panasonic dealer, and quote the model number and serial number (both are located at the rear of the T.V.).

T.V. Games / home Computers
Extended use of T.V. games or home computers with any television set can cause a permanent 'shadow' on the screen. This type of irreversible picture tube damage, can be limited by observing the following points:
(a) Reduce the brightness and contrast levels to a minimum viewing level.
(b) Do not operate the television set for a continuous period of time while using T.V. games or home computers

This type of picture tube damage, is not an operating defect, and as such is not covered by the Panasonic warranty

Accessories: 1 remote control (TNQ8EO428-1) 2 RO3 size batteries.
1 TV stand,type TS-28A1 for model TX-28A1,TS-24A1 for model TX-24A1.

Note: Certain TV functions have a last position memory, that is to say whatever level was set at the time of switch off, will be the level displayed when the receiver is switched on again. See table below for list of last memory functions and no memory functions.

Last Position Memory	**No Last Position Memory**
Programme Position	Ambience
Volume	Fine Tune
Brightness	AV1,AV2 or AV3
Colour	Nicam Mono
Contrast	Sound Mute
Bass	Teletext
Treble	
Balance	

Trouble Shooting

Before calling for service, make a few simple checks as follows:

Symptoms	Checks
No picture No sound	Not plugged into A.C. supply. Not switched on Check contrast, brightness and volume settings.
Normal picture No sound	Check volume level. Check sound mute button on remote control. Check Int/Ext. speaker switch
No colour Normal sound	Check colour level.
Interference on screen Distorted sound	Electrical appliances, cars, motorcycles, fluorescent lights.
Multiple image. Snowy picture. Distorted sound. Characters missing in Teletext mode.	Direction, location and/or aerial connection. Adjust fine tune buttons.
Remote control mal-functions or reduction	Replace batteries. Clean indicator window.

Specifications

Power source	240V, 50Hz A.C.
Power consumption	150W(150W) Max.
Receiving system	PAL I
Receiving Channels	UHF 21 - 69
Tuning system	Advance CITAC 50 Positions FS system.
Picture tube	66(59)cm V FST 110°
Audio output	2 x 10 Watts - Music - (internal speakers). 2 x 20 Watts - Music - (external speakers) 4 OHMS.
Speakers	2 x 10cm round. 2 x 7.5cm x 4.5cm. (Exponential Principle).
Terminals	Aerial. External loudspeakers. Headphone. AV1 21 pin terminal. (Video, Audio IN / OUT/RGB IN) AV2 BNC Video IN. S- Video IN. RCA Audio IN. AV3 BNC Video IN. RCA Audio IN. MONITOR OUT BNC Video OUT. RCA Audio OUT.
Dimensions	(H) 572(522) mm (W) 686(628)mm (D) 489(460)mm.
Weight	39kg.(33kg.)

Note: Specifications are subject to change without notice. Weight and dimensions shown are approximate. Dimensions shown in brackets refer to Model TX-24A1.

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Willoughby Road.
Bracknell,
Berks RG12 4FT